

App. No. 10/720,953
Amendment Dated March 21, 2005
Reply to Office Action of December 20, 2005

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application. The Office Action, dated December 20, 2004: objected to claims 1-19, rejected claim 20 under 35 USC § 112, 2nd paragraph, and objected to the drawings under 37 CFR § 1.83(a). Claims 1, 6, 12, 17, 18 and 20 are amended. No new matter has been added.

Objections to claims 1 - 19

Claims 1, 6, 12, 17 and 18 are objected to for various informalities. Claims 1, 6, 12, 17 and 18 have been amended to correct for such minor infelicities. It is believed that claims 1, 6, 12, 17 and 18 are now in proper form for allowance.

Applicant has reviewed claim 20 and identified a minor error that was not noted in the office action. Claim 20 is amended and now believed to be in proper form for allowance.

Claims 2-5, 7-11, 13-16, and 19 are also objected to, however the objection to such claims is made without a specific basis of rejection. These claims have been reviewed by Applicant for minor errors. It is presumed that claims 2-5, 7-11, 13-16 and 19 are objected to as being based upon a claim that is in improper form, but are otherwise in proper form.

Objection to claim 20 under 35 USC § 112, 2nd Paragraph

Claim 20 is objected to 35 USC § 112, 2nd paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has reviewed the Examiner's remarks and thanks the Examiner for such a thorough review. A minor typographical error was found in claim 20 that has been corrected by

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amendment. It is important to note that no change in the subject matter of the claim has occurred, and that the amendment to claim 20 is made merely to eliminate a minor typographical error. It is believed that claim 20, as amended, is clearly understood and that the objection is overcome. A notice of allowance with respect to claim 20 is respectfully requested.

Objection to the drawings under 37 CFR § 1.83(a)

The drawings are objected to under 37 CFR § 1.83(a) as failing to show every feature of the invention that is specified in the claims. According too the office action, the step of "coupling current from the inductor to the load circuit when the ramp signal level has reached the reference signal level" as recited in claim 17, is not shown in the drawings. Applicant's do hereby traverse the objection to the drawings for the reasons stated below.

The requirements for drawings are set forth in Title 35 of the United States Code (USC), in section 113 as follows:

"The applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented (emphasis added)".

A reading of the official commentary associated with 35 USC § 113, as well as the plain meaning of the statute dictates that a drawing is NOT required unless the subject matter cannot be understood without the use of a drawing. Where the subject matter described by the specification and the claims in understood WITHOUT a drawing, no such drawing can be required under law. Although the Code of Federal Regulations (CFR) is derived from Title 35, the CFR may not impose restrictions on practice that contradict the statute found in Title 35.

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Accordingly, it is believed that claim 17 as written is clear and does not require a specific drawing as is suggested in the office action.

The subject matter that is described in Claim 17 is well understood in terms of its plain meaning, and fully supported by the specification. For example, features from claim 17 are already present in FIGURES 2 and 5 and the supporting text that is found in the Applicant's specification. Examples of such support for Claim 17 are described below.

Referring to FIGURE 2, a Schottky-type diode (D_S) is shown as coupled between the inductor (L) and the load circuit (e.g., the stack circuit and capacitor C_{OUT}), and a transistor switch circuit (T_{SW}) is shown as coupled between the inductor and a circuit ground. As described on page 4 of Applicant's specification, "Inductor L is selectively coupled to ground through transistor switch circuit T_{SW} when transistor switch circuit T_{SW} is active, and coupled to the stack circuit through Schottky diode D_S when transistor switch circuit T_{SW} is inactive." Transistor switch circuit (T_{SW}) is responsive to an output of the latch circuit ($LATCH$). A comparator circuit ($COMP$) is arranged to set an output of $LATCH$ to a logic 0 signal whenever the ramp signal ($VRAMP$) exceeds the reference signal ($VREF$). In other words, transistor switch circuit (T_{SW}) can be deactivated after the ramp signal exceeds the reference signal ($VREF$) since that is when the latch circuit can set one of the latch outputs to logic 0. Once the transistor switching circuit (T_{SW}) is deactivated, current (I_L) from the inductor (L) can be coupled to the load through the Schottky-type diode (D_S).

Referring to FIGURE 5, and the supporting text found in Applicant's specification, current is clearly coupled to the load from the inductor (e.g., see block 511). The timing for

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when the coupling occurs is determined by flow chart between blocks 504 and 511. Assuming the inductor is not charged initially, there is no inductor current (I_L) that can be directed to the load and voltage VSW will be low (see blocks 504 - 505). Between blocks 507-509, the inductor is charged until VRAMP exceeds VREF (see block 509). After VRAMP > VREF, charging is terminated (block 510), and processing continues back to blocks 504 - 505 where voltage VSW will not be low since the inductor is now charged and current is delivered to the load from the inductor at block 511.

For the reasons stated above it is believed that the claimed subject matter identified by claim 17 is fully understood within the scope of the requirements set forth by 35 USC § 113, and that no additional drawings are necessary. It is therefore respectfully requested that the objection to the drawings under 37 CFR § 1.83(a) be withdrawn and such notice be provided to Applicant.


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Allowable Subject Matter

The office action stated that claims 1 - 20 would be allowable if rewritten or amended to overcome the objections and/or rejection under 35 USC § 112, 2nd paragraph. In view of the foregoing amendments and remarks, all pending claims (1 - 20) are believed to be allowable and the application is in proper condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicant at the telephone number provided below.

Respectfully submitted,

MERCHANT & GOULD P.C.


Brett A. Hertzberg
Registration No. 42,660
Direct Dial: 206.342.6255

MERCHANT & GOULD P.C.
P. O. Box 2903
Minneapolis, Minnesota 55402-0903
206.342.6200
BAH/ab

